

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

**Rakoll® DUPLIT HARTER FARBLOS**

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	21.05.2022	100000018326	Date of first issue: 21.05.2022

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Product name** : Rakoll® DUPLIT HARTER FARBLOS**1.2 Relevant identified uses of the substance or mixture and uses advised against**Use of the Sub-  
stance/Mixture : Hardener / Curing agentRecommended restrictions  
on use : For industrial use only.**1.3 Details of the supplier of the safety data sheet**

Company : H.B. Fuller, Isar-Rakoll, S.A.

Address : Estrada Nacional 13  
PT-4486-851 Mindelo - Vila do Conde  
+351 229 288 200E-mail address of person  
responsible for the SDS : EU-MSDS@hbfuller.com**1.4 Emergency telephone number**

Emergency telephone number : +44 1235 239 670 (24 hours)

National Poisons Information Centre (NPIC): 01 809 2566 (24  
hours)

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**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Corrosive to metals, Category 1 H290: May be corrosive to metals.

Serious eye damage, Category 1 H318: Causes serious eye damage.

**2.2 Label elements****2.3 Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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**SECTION 3: Composition/information on ingredients**
**3.2 Mixtures**
**Components**

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
aluminum chloride, basic	1327-41-9 215-477-2 01-2119531563-43-0000	Met. Corr. 1; H290 Eye Dam. 1; H318	>= 30 - < 50
hydrogen chloride	7647-01-0 231-595-7 017-002-00-2 01-2119484862-27-0000	Press. Gas Acute Tox. 4; H302 Acute Tox. 3; H331 Skin Corr. 1A; H314 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system)  specific concentration limit Skin Corr. 1B; H314 >= 25 % Skin Irrit. 2; H315 10 - < 25 % Eye Irrit. 2; H319 10 - < 25 % STOT SE 3; H335 >= 10 %  Acute toxicity estimate  Acute oral toxicity: 700 mg/kg Acute inhalation toxicity (gas): 1562 ppm	>= 5 - < 10

For explanation of abbreviations see section 16.

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#### SECTION 4: First aid measures

##### 4.1 Description of first aid measures

- General advice : If on clothes, remove clothes.  
Show this safety data sheet to the doctor in attendance.
- If inhaled : Remove person to fresh air. If signs/symptoms continue, get medical attention.  
In case of unconsciousness bring patient into stable side position for transport.
- In case of skin contact : Wash off immediately with plenty of water.  
If skin irritation persists, call a physician.
- In case of eye contact : Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.
- If swallowed : Do NOT induce vomiting.  
If conscious, drink plenty of water.  
If symptoms persist, call a physician.

##### 4.2 Most important symptoms and effects, both acute and delayed

None known.

##### 4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No further relevant information available.

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#### SECTION 5: Firefighting measures

##### 5.1 Extinguishing media

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Water mist  
Foam  
Dry powder  
Carbon dioxide (CO<sub>2</sub>)

##### 5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : No further relevant information available.

##### 5.3 Advice for firefighters

Special protective equipment for firefighters : No special protective measures against fire required.

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Further information : In the event of fire, wear self-contained breathing apparatus. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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#### SECTION 6: Accidental release measures

##### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.  
Evacuate personnel to safe areas.  
Ensure adequate ventilation.

##### 6.2 Environmental precautions

Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.  
Dilute with much water.  
The product should not be allowed to enter drains, water courses or the soil.

##### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Ensure adequate ventilation.  
Use neutralizing agents.  
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Send for recovery or disposal in suitable containers.  
Dispose of contaminated material as waste according to section 13.

##### 6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8., For disposal considerations see section 13.

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#### SECTION 7: Handling and storage

##### 7.1 Precautions for safe handling

Advice on safe handling : Avoid formation of aerosol.  
Use only with adequate ventilation.  
Handle with care.  
Keep eye wash bottle available on working place.  
Keep away from children.  
Avoid release to the environment.

Advice on protection against fire and explosion : In the event of fire and/or explosion do not breathe fumes.  
Wear self-contained breathing apparatus and protective suit.  
Have fire extinguishing equipment ready in case of nearby

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fire.

#### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep dark, cool and dry. Do not freeze.

Further information on storage conditions : Keep container tightly sealed.

#### 7.3 Specific end use(s)

Specific use(s) : No further relevant information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
aluminum chloride, basic	1327-41-9	OELV - 8 hrs (TWA)	2 mg/m <sup>3</sup>	IE OEL
	Further information: Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit value should be used			
		OELV - 8 hrs (TWA)	2 mg/m <sup>3</sup> (Aluminium)	IE OEL
	Further information: Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit value should be used			
hydrogen chloride	7647-01-0	STEL	10 ppm 15 mg/m <sup>3</sup>	2000/39/EC
	Further information: Indicative			
		TWA	5 ppm 8 mg/m <sup>3</sup>	2000/39/EC
	Further information: Indicative			
		OELV - 8 hrs (TWA)	5 ppm 8 mg/m <sup>3</sup>	IE OEL
		OELV - 15 min (STEL)	10 ppm 15 mg/m <sup>3</sup>	IE OEL

### 8.2 Exposure controls

#### Engineering measures

Please take care on national and local requirements.

#### Personal protective equipment

Eye protection : Tightly fitting safety goggles  
Face-shield

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Hand protection	
Material	: Nitrile rubber
Remarks	: The glove material has to be impermeable and resistant to the product/the substance/the preparation. The exact break through time can be obtained from the protective glove producer and this has to be observed.
Skin and body protection	: Protective clothing
Respiratory protection	: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. In case of brief exposure or low pollution (exceeding of TLV) use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.
Protective measures	: Keep away from food, drink and animal feedingstuffs. Instantly remove any soiled and impregnated garments. Wash hands before breaks and immediately after handling the product. Avoid contact with the eyes and skin. Store protective clothing separately.

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**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

Physical state	: liquid
Colour	: light yellow
Odour	: characteristic
Odour Threshold	: is not determined
Melting point/freezing point	: 0 °C
Boiling point/boiling range	: 100 °C
Flammability	: Not classified as a flammability hazard
Upper explosion limit / Upper flammability limit	: Upper flammability limit is not determined
Lower explosion limit / Lower	: Lower flammability limit

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flammability limit	:	is not determined
Flash point	:	not applicable
Auto-ignition temperature	:	not self-igniting
Decomposition temperature	:	not applicable
pH	:	< 1,5
Solubility(ies) Water solubility	:	completely miscible
Partition coefficient: n- octanol/water	:	no data available
Vapour pressure	:	23 hPa (20 °C)
Density	:	1,3 g/cm <sup>3</sup> (20 °C)
Relative vapour density	:	is not determined

#### 9.2 Other information

Explosives	:	Not explosive
Evaporation rate	:	is not determined

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### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

No further relevant information available.

#### 10.2 Chemical stability

The product is chemically stable.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions	:	None known.
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#### 10.4 Conditions to avoid

Conditions to avoid	:	No further relevant information available.
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#### 10.5 Incompatible materials

Materials to avoid	:	No further relevant information available.
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#### 10.6 Hazardous decomposition products

No hazardous decomposition products are known.

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### SECTION 11: Toxicological information

#### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

##### Acute toxicity

###### Product:

Acute oral toxicity : Based on available data, the classification criteria are not met.

Acute toxicity estimate: > 2.000 mg/kg  
Method: Calculation method

Acute inhalation toxicity : Based on available data, the classification criteria are not met.

Acute toxicity estimate: 15778 ppm  
Exposure time: 4 h  
Test atmosphere: gas  
Method: Calculation method

Acute dermal toxicity : Based on available data, the classification criteria are not met.

###### Components:

###### **aluminum chloride, basic:**

Acute oral toxicity : LD50 Oral (Rat): > 2.000 mg/kg

###### **hydrogen chloride:**

Acute oral toxicity : LD50 Oral (Rat): 700 mg/kg

Acute toxicity estimate: 700 mg/kg  
Method: Calculation method

Acute inhalation toxicity : LC50 (Rat): 3124 ppm  
Exposure time: 1 h  
Test atmosphere: gas

Acute toxicity estimate: 1562 ppm  
Test atmosphere: gas  
Method: Calculation method



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#### 11.2 Information on other hazards

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### SECTION 12: Ecological information

#### 12.1 Toxicity

##### Components:

##### hydrogen chloride:

Toxicity to fish : LC50 (Gambusia affinis (Mosquito fish)): 282 mg/l  
Exposure time: 96 h  
Test Type: static test

#### 12.2 Persistence and degradability

No data available

#### 12.3 Bioaccumulative potential

No data available

#### 12.4 Mobility in soil

##### Product:

Mobility : Medium: Soil  
Remarks: Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous., Must not reach sewage water or drainage ditch undiluted or unneutralised., Do not allow product to reach ground water, water bodies or sewage system., Very toxic to aquatic organisms, Toxic effects on fish and plankton

#### 12.5 Results of PBT and vPvB assessment

##### Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

#### 12.6 Endocrine disrupting properties

##### Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation

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(EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

#### 12.7 Other adverse effects

No data available

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

Product : Do not dispose of with domestic refuse.  
Do not dispose of waste into sewer.  
The generation of waste should be avoided or minimized wherever possible.  
Disposal must be made according to official regulations.  
Hand over to disposers of hazardous waste.  
Incineration under approved, controlled conditions using incinerators suitable or designed for the disposal of hazardous chemical wastes, is the preferred method for disposal.

Contaminated packaging : Recommended cleaning agent: Water, if necessary with cleaning agent.

### SECTION 14: Transport information

#### 14.1 UN number or ID number

ADR : UN 2581  
RID : UN 2581  
IMDG : UN 2581  
IATA : UN 2581

#### 14.2 UN proper shipping name

ADR : ALUMINIUM CHLORIDE, SOLUTION  
RID : ALUMINIUM CHLORIDE, SOLUTION  
IMDG : ALUMINIUM CHLORIDE SOLUTION  
IATA : Aluminium chloride solution

#### 14.3 Transport hazard class(es)

ADR : 8  
RID : 8  
IMDG : 8

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**IATA** : 8

#### 14.4 Packing group

##### ADR

Packing group : III  
Classification Code : C1  
Hazard Identification Number : 80  
Labels : 8  
Tunnel restriction code : (E)

##### RID

Packing group : III  
Classification Code : C1  
Hazard Identification Number : 80  
Labels : 8

##### IMDG

Packing group : III  
Labels : 8  
EmS Code : F-A, S-B

##### IATA (Cargo)

Packing instruction (cargo aircraft) : 856  
Packing instruction (LQ) : Y841  
Packing group : III  
Labels : Corrosive

##### IATA\_P (Passenger)

Packing instruction (passenger aircraft) : 852  
Packing instruction (LQ) : Y841  
Packing group : III  
Labels : Corrosive

#### 14.5 Environmental hazards

##### ADR

Environmentally hazardous : no

##### RID

Environmentally hazardous : no

##### IMDG

Marine pollutant : no

#### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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#### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: Number on list 3

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : not applicable

RoHS: 2011/65/EU, Restriction of Hazardous Substances : not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : not applicable

REACH - List of substances subject to authorisation (Annex XIV) : not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. 16 Hydrogen chloride (liquefied gas)

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) not applicable

#### The components of this product are reported in the following inventories:

TSCA : All substances listed as active on the TSCA inventory

DSL : All components of this product are on the Canadian DSL

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ENCS	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
REACH	:	On the inventory, or in compliance with the inventory

#### 15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this mixture.

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### SECTION 16: Other information

#### Full text of H-Statements

H290	:	May be corrosive to metals.
H302	:	Harmful if swallowed.
H314	:	Causes severe skin burns and eye damage.
H318	:	Causes serious eye damage.
H331	:	Toxic if inhaled.
H335	:	May cause respiratory irritation.

#### Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Eye Dam.	:	Serious eye damage
Met. Corr.	:	Corrosive to metals
Press. Gas	:	Gases under pressure
Skin Corr.	:	Skin corrosion
STOT SE	:	Specific target organ toxicity - single exposure
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
IE OEL	:	Ireland. List of Chemical Agents and Occupational Exposure Limit Values - Schedule 1
2000/39/EC / TWA	:	Limit Value - eight hours
2000/39/EC / STEL	:	Short term exposure limit
IE OEL / OELV - 8 hrs (TWA)	:	Occupational exposure limit value (8-hour reference period)
IE OEL / OELV - 15 min (STEL)	:	Occupational exposure limit value (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by

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Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECL - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

#### Further information

Other information : This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

Contact Point : Prepared by: Global Regulatory Department  
EU-MSDS@hbfuller.com

#### Classification of the mixture:

Met. Corr. 1	H290
Eye Dam. 1	H318

#### Classification procedure:

Calculation method
Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific

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material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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